

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Ephraim GUTMARK *et al.*

Application No.: **10/725,562**

Filing Date: 3 December 2003

For: Method for Affecting Thermoacoustic Oscillations
in Combustion Systems

Art Unit: 3749

Examiner: Basichas, Alfred

Attorney Ref. No.: 003-102

Via EFS-Web

REPLY TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Appellant acknowledges receipt of the Notice of Non-Compliant Appeal Brief dated 8 August 2007. Appellant provides herein:

(1) A substitute Status of Claims section, which also identifies the claims on appeal;
and

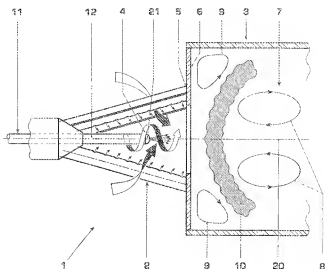
(2) A substitute Summary of the Claimed Invention section, which 'maps' the elements of each of the independent claims, and of the dependent claims argued separately, to the specification by page and line number, and to the drawing figures by reference number when applicable and, further to the telephone conversation between the undersigned and Mr. Tyson, expressly identifies the claim to which each portion of the summary corresponds.

III. STATUS OF CLAIMS

Claims 1-8 and 16 stand twice rejected after the Office Action dated 10 October 2006. Claims 9-15 have been cancelled. The rejections of Claims 1-8 and 16 are the subject of this appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1: This application describes and claims methods of affecting thermoacoustic oscillations in a combustion system [page 2, lines 10-13]. A copy of Fig. 1 of this application is reproduced herein to assist in a better understanding of the structures of an exemplary system that can be used in the claimed methods. The combustion system includes at least one burner 2 and at least one combustor 3 [Page 5, lines 12-18; Fig. 1]. The method includes modulating fuel injection into a recirculation zone 7 which forms in the combustor 3 [*passim*, e.g.: page 5, line 28 to page 6, line 3; page 7, lines 5-8].



Claim 2: In the method, in which the total quantity of fuel injection includes a first quantity and a second quantity, the method also includes injecting the first quantity of fuel at a constant rate and injecting the second quantity of fuel in a modulated manner [page 7, lines 20-29].

Claim 3: In the method, the second quantity of fuel can be smaller than the first quantity of fuel [page 6, lines 29-35 and page 7, lines 31-35].

Claim 4: In the method, the second quantity of fuel can be approximately between 6% and 1% of the total quantity of fuel [page 8, lines 1-5].

Claim 5: In the method, the modulating fuel injection can be performed independently of an oscillation phase of the thermoacoustic oscillations [page 8, lines 21-25].

Claim 6: In the method, the modulating fuel injection can be coupled to an oscillation phase of the thermoacoustic oscillations [page 10, line 35 through page 11, line 1].

Claim 7: In the method, the modulating fuel injection can be performed exclusively into the recirculation zone [page 4, lines 1-9; page 7, line 35 through page 8, line 1].

Claim 8: In the method, the injection of fuel into the recirculation zone can be performed exclusively in a modulated manner [page 4, lines 1-9; page 7, line 35 through page 8, line 1].

Claim 16: Additionally, this application describes and claims methods of affecting thermoacoustic oscillations in a combustion system [page 2, lines 10-13]. The method includes providing at least one burner 2, at least one combustor 3, and an abrupt widening 5, 6 of a flow cross-section between the at least one burner and the at least one combustor, the abrupt widening causing flow to form a recirculation zone 7, 9 in the at least one combustor [page 5, line 18-22]. The method also includes swirling flow 4 through the at least one burner [page 5, lines 12-16], and modulating fuel injection into the recirculation zone [*passim*, e.g.: page 5, line 28 to page 6, line 3; page 7, lines 5-8].

Respectfully submitted,

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